January, 1929, to June, 1932, has been published by the H. W. Wilson Company of New York City. The index is issued monthly, the numbers are cumulated throughout the year and bound volumes are issued annually. These are then superseded by the permanent volumes. The Guide covers the complete contents of the periodicals that it indexes by subjects and authors. 1,047 periodicals are indexed, including SCIENCE, *School and Society* and *The Scientific Monthly*. The first two of these are among nine weekly journals whose contents are selected as most worthy of permanent record and reference.

THE next award of the Alvarenga Prize, amounting to about $300, will be made on July 14, 1933. Essays may be on any subject in medicine and should represent an addition to the knowledge and understanding of the subject based on either original or literary research. The prize was not awarded in 1932. Communications should be addressed to Dr. John H. Girvin, secretary, 19 South Twenty-second Street, Philadelphia.

ACCORDING to the *Journal* of the American Medical Association, the Rumanian Academy of Sciences controls a fund, collected mainly from bequests, the interest of which, according to the wish of the testator, is awarded to the best literary works that have appeared during the year. The committee on awards has just finished reading the contributions for 1931, and out of the many awards the following were given for medical treatises: The Oroveanu prize of 70,000 lei has been awarded to Dr. Mina Minovici, professor of forensic medicine at the University of Budapest, for the second volume of his "Manual of Forensic Medicine." The Riegler 6,000 lei prize was awarded to Professor Peter Tomescu for his "Clinical Experimental Studies," which will be shortly translated into German. The Adamachi prize was given to Dr. Valeriu Bologa for his work "The History of Scientific Medical Work in Rumania," read in part at the recent International Congress on Medical History. The Constantinide prize was divided between Aurel Voina, lecturer at the University of Bucharest, for his treatise "Prostitution and Venereal Disease in Rumania," and Drs. Staicovici and Westfried for their monograph dealing with public health affairs of the city of Bucharest in the post-war years.

A CORRESPONDENT writes: "Cottonwood Cave on the Lincoln National Forest in New Mexico has been used for a goat shed for a great many years, also as a bat loft perhaps for thousands of years; consequently there are great deposits of guano in the bottom of the cave. As it is very rare that any water runs into the upper part of this cave, the deposit has become very dry. Presumably some visitor started a fire in the litter, not knowing that it would continue to burn. Judging from the distance it traveled, the fire had been burning for about three weeks when it was first discovered. At that time, the gas formed by the burning nitrates was so strong that the party could not go down to the fire. However, when it was visited by Supervisor O. Fred Arthur and Mr. Musgrave on September 24, the fumes were not bad except at the entrance to the cave. Fire guards were sent into the cave and put out the fire by packing water from a supply further down in the cave. An interesting phase of the fire was that the gas, evidently nitric acid gas, was so strong that it killed the leaves on oaks and maples at the mouth of the cave and about 200 feet from the fire. At no time during the fire was there enough heat to kill these leaves."

DISCUSSION

A FORGOTTEN EVOLUTIONIST

ON looking through the volumes of the short-lived *Archiv für Zoologie und Zootomie* my attention was attracted to an article (Bd. III, p. 167, 1802) entitled "Ueber den ursprünglichen Stamm des Menschengeschlechts," by D. Schelver. Being curious to see what the writer would say upon this topic in the year 1802, I discovered that the article contained a most interesting speculation on the probable original home of the human species and the source from which man was derived. Schelver takes issue with the then prevailing doctrine that man originated somewhere in southwestern Asia, urging that we can not legitimately argue from the origin of culture to the origin of the human race. The natural place in which to seek for the origin of man, he argues, is the region in which the most primitive men are living at the present time. Basing his conclusion on a number of anthropological characteristics, as well as cultural development, Schelver contends that the Negroes are the most primitive members of the human family, and that Africa must, therefore, have been the original cradle of the human race. But whence the Negroes? The Negroes, however, are far from representing the original ancestors of men. They have progressed far, both culturally and structurally, from the original human beings. It is no mere coincidence, according to Schelver, that Africa is the home of both the Negroes and the anthropoid apes. But man can not be derived from any existing species of anthropoids. "I shall

not assert," says Schelver, "that the original natural man (Naturmensch) came from any species of ape at present known, because I can not support this by positive proofs; and since we know quite as little of the original source of the apes, as of the human family, the apes may represent a degenerate branch of the original stem of the human species. I am acquainted with no distinguishing characteristic, however, which sharply separates the apes from human beings."

" . . . The bodily nature of the human race must, in its origin, completely integrade with that of animals, and it is not improbable that, for example, we may discover hairy quadrupeds with the capacity for becoming human beings. . . . As to lowly origin, man is clearly worthy of all the more honor the lower the creatures from which he was descended."

Language, says Schelver, is a product of culture. "Der mensch hat sie erfunden, selbst geschaffen." The linguistic shortcomings of the apes, it is suggested, may be associated with the possession of vocal sacs which may, as was suggested by Sömmering, act as an impediment to the imitation of sound. These sacs are lacking in man, who, on the other hand, has another organ in a somewhat similar position, namely, the thyroid gland, which is stated to be absent in the apes. At any rate, the thyroid was not mentioned by Camper, and Schelver remarks that it could scarcely have escaped being noticed by so attentive and accurate an observer. Since the apes have vocal sacs, which man has not, and since man has the thyroid, which Schelver is persuaded is absent in the apes—"aber so viel mir bekannt ist," he cautiously adds—the hypothesis is advanced that the mysterious thyroid, whose function was so long sought for in vain, might represent the degenerate vocal sacs of the anthropoids. This conclusion is supported by certain statements concerning the outlet of the thyroid, which rest upon no better foundation than the alleged absence of this organ in the apes. That Schelver should have been led astray in his attempt at homologizing is quite natural when one considers the facts at his disposal. The point of chief interest is that the attempt was made at all.

What caused the human and anthropoid stems to diverge is a problem for which Schelver has no solution to offer. While his evolutionary concepts have much of the vagueness that characterizes the speculations of the earlier transformists, it is clear that he regards man as having a common origin with the higher apes, and that the higher types of animals are derived from lower ones, as is indicated by his reference to the genealogical table of organic life, *"der Stammtafel der ganzen lebenen Schöpfung, . . . die bis an das erste punctum saliens alles Lebens zurückführet."*

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A VICIOUS CIRCLE IN CYTOLOGY

THE existence of rings and sometimes strings of chromosomes has been known for a number of years and apparently first attracted marked attention in the case of the genus Oenothera. This genus is particularly unfavorable for cytological investigation on account of the extremely small size of its nuclei. It has accordingly been unsuitable for working out the fundamental significance of ring formation. Much more suitable material for such investigations is supplied by the monocotyledonous family Tradescantiae, which have been investigated by various American and European cytologists. The conclusion has been reached that the rings of chromosomes, where they occur, are series of univalents which have more or less become confused with one another and pass over to opposite poles in approximate alternation at the metaphase of the reduction or meiotic division. Unfortunately, this statement is palpably incorrect. Apparently it is due to the study of the material by means of excessively thick sections or by the smear method. Both of these procedures have the fault of obscuring important details. The situation in the case of the Tradescantiae has been studied by means of thin sections appropriately developed by approved methods of staining. It has become clear in this connection that the so-called synaptic mates are actually present in Tradescantia as normally elsewhere and that they present clearly the phenomenon of chiasmotypy, a phenomenon to which, by the way, apparently an entirely disproportionate amount of attention has been given in recent years. The pairs of chromosomes become somewhat indistinct in the pachytene stage which follows the advent of pairs. This is a common phenomenon at pachytene and it is amazing that it has not been noticed in this instance. The whole situation, in fact, suggests a surprising superficiality on the part of certain observers which is in marked contrast to the large claims which they have made on the attention of cytologists in general. It is quite obvious that in *Tradescantia virginiana,* for example, the process of meiosis follows perfectly that which is not uncommon in hybrids. The apparent serially arranged, miscalled univalent chromosomes represent in reality a segmented pachytene in which the synaptic pairs are lined up, back to back. This view of the matter harmonizes further with the observations of Hakansson on hybrid Godetias. Here he noted, while the species showed little or no so-called ring formation, that in